

## AIR FORCE



FRONT-END ANALYSIS OF THE INSTRUCTOR'S JOB IN SELF-PACED INSTRUCTION

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This report divulges the development an instructor's job in a self-paced instructional en analyzed. The development process is carefully one hundred ninety-one tasks in the job inven Analyses of the data acquired are included.	d administration of inst vironment. A validated described. One thousan	d one hundred	leveloped, administered, and inineteen respondents rated

#### SUMMARY

#### Problem

Planning a training program requires careful identification of all tasks which the graduate may perform. Training can then be based upon empirical data as opposed to some arbitrary "gut feeling" or personal opinion. Determination of the content and nature of training should always be based upon accurate job and task descriptions. In fact, the first operation in the process of applying the systems approach in instruction, as stated in an AFM, requires the gathering and analyzing of job performance requirements.

#### Approach

This study was intended to identify the job performance requirements of instructors in an individualized training environment, which includes computer-managed instruction (CMI) and computer-assisted (presented) instruction (CAI). Determination of formal and on-the-job training requirements then could be based upon empirical data provided by job incumbents. The final results will be the development and validation of a formal training program for instructors who function in an individualized training environment. The study also identified duties and tasks to be taught on the job.

#### Results

The present report describes one practical method for accurately identifying the job performance requirements of instructors in the individualized training environment. The approach develops and presents a meaningful frame of reference for describing what tasks are performed in this environment. This identification of job performance requirements constitutes the first phase in the development of training for personnel selected to fill these new roles in training. Other phases of the total project, to be described in subsequent reports, cover procedures actually used to determine course content, objectives, the development and validation of modules, and evaluation.

The development and administration of the Air Force Occupational Survey entitled *Individualized Training Instructor*, 15 November 1975, herein reported, provides a current factual foundation for developing training for learning center instructors. Two critical needs within the field of individualized instruction are incorporated—one long range, the other immediate.

#### Long range need

Curriculum development within Air Force technical training, under the general guidance of Air Force manuals, often results in nontraditional course designs. Instruction adapted to individual needs may not result from the traditional lock-step approaches. Modular instruction developed by the curriculum designer requires application and attention to the individual student in the learning center. The individualized training instructor has a new role. Instructor training programs generally have not trained the individualized training instructor for the specific tasks and responsibilities in this new role.

#### Immediate need

Nearly 10% of instructors currently being trained at Lowry AFB, Colorado, will be assigned duty in an individually paced learning center. The majority of these new instructors who will work in a nontraditional environment will be assigned to the four courses in the experimental Advanced Instructional System. The Instructor Training Branch has been assigned the explicit requirement to provide training support for the Advanced Instructional System (which will also include computer-managed instruction) in the individually paced learning center.

Needless to say, this training must be job relevant—developed to meet the job requirements. Job relevant training is initiated by clearly defining the extent and limits of the training requirements. Knowledges, skills and attitudes essential to job success must be included but not trained beyond job entry proficiency requirements.

No task list was found which dealt with the job of the instructor working in a self-paced environment. While some instructor training for this new role was located, none of that training was based on job data or empirically determined training requirements.



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### FRONT-END ANALYSIS OF THE INSTRUCTOR'S JOB IN SELF-PACED INSTRUCTION

#### I. BACKGROUND AND INTRODUCTION

No single source provided an adequate base for the determination of the job performance requirements of an individualized training instructor. Since numerous agencies provide nontraditional instruction, including individualized instruction, it was anticipated that an adequate listing of instructor job performance requirements would be available. However, in spite of several site visits, many telephone inquiries, and an extensive review of the literature such a listing could not be located. In fact, there seemed to be a universal vaccuum, with all contacted agencies anxious for a list of job performance requirements.

#### II. PROCEDURES

#### Site Visits

One or more of the team members visited the following sites, making special inquiries reqarding training and job requirements in the individualized learning environment.

Naval Training Center (NTC) San Diego, CA. The Basic Electricity and Electronics (BE&E) Course at San Diego was visited since this course was known to be self-paced (with plans for computer management soon to be implemented). An on-the-job (OJT) training program (following the Navy Basic Instructor Course) was being conducted by the BE&E Course to prepare individualized training instructors (called Learning Supervisors in the Navy) for their specific responsibilities and to insure their subject matter proficiency. The instructor training function at NTC San Diego now offers a learning supervisor course for instructors assigned to an individual-paced learning environment. Modules are being developed in text, programmed text, and prenarrated slide alternatives. Titles of the available modules are: Philosophy of an Individualized Learning System, Individual Differences, Laws/Ways of Learning, Human Values, Functions of the Learning Supervisor, Administrative Aids and Diagnostic Devices, Media Selection, Interpersonal Communication, Attitudes Toward Learning, Modes of Adjustment, Counseling Practices, Learning Problems, and Computer-Managed Instruction. It was reported that these modules were based upon a training analysis which included a survey of Navy instructors in working in a student paced learning environment. The documentation or content of this analysis could not be located.

U.S. Army Infantry School (Fort Benning, GA). The basic instructor course at Fort Benning was visited since it was known to be self-paced. The basic officer and NCO courses were oriented to training the platform instructor. A training analysis of the platform instructor (by contract) resulted in the development of three instructor training tracks (Officer, Senior NCO, and Course Manager). The course was modular and student paced. Several trainer appraisal kits involved platform instruction with peer validation critique and expert critique (including representation from course to which the instructor was assigned). A technical report by INSGROUP, Incorporated gives recommended approaches, training objectives, strategies and evaluation procedures. This program, however, did train personnel for nontraditional instruction although it used an individual paced, modular approach.

USAFSAAS, Keesler AFB, MS. Two programs were visited at Keesler AFB, the OJT program in the Basic Electronics Course and a pre-service program provided by the Instructor Training Branch. The OJT program involved the immediate assignment of each new instructor (who had completed preservice training) to one of three instructor learning centers (depending upon which segment of the Basic Electronics Course he would teach). Under a senior instructor the new instructor was provided job related training and also went through the modular basic electronics materials as a student. The job related training appeared to have been developed in response to needs perceived by the course supervisors. The deliberate intent was to provide a job performance model, assuming the new instructor would teach as he was taught. Instructor Training Branch had developed an in-service course of 36 hours entitled The Instructor's Role in Self-Paced Instruction. Copies of the course, course documentation and front-end analysis for this program were provided. However, no empirical data to support the analysis were available.

Other sites were visited (Sheppard AFB, Texas, Mountain Bell Telephone, Normandy Elementary School) but, while the programs were of great interest, no training of the learning center instructors was observed.

#### Other Resources

Only two of the numerous peripherally related documents surveyed were found useful. The first was a modification of a study by M. Odom and E. Roberts (of New England Bell and Bell Canada) entitled "Profile of a Successful Administrator." The task roles portion of the modification provided a significant contribution to the initial task/duty list for this study. The second helpful document was the USAF occupational survey report for the technical training instructor. The OSR was used to insure the new survey being developed was structurally compatible with previous and future Air Force occupational surveys.

#### III. APPROACH

No validated task list was available which specified the instructor's roles in self-paced instruction. While some instructor training was developed by other agencies (as reported in the previous section) none was based upon job performance data. Therefore, previous related work was determined as inadequate for establishing training requirements for the learning center instructor. The initial need was to acquire some empirical data relating to the learning center instructor's job. The occupational survey was selected as the preferred method for gathering data upon which to base the determination of training requirements.

A general outline composed of appropriate groupings was established, based largely upon an earlier occupational survey of the traditional technical instructor tasks and duties. The categories used in this outline were: out-of-class administration, preparing for instruction, in-class administration, testing, counseling, self-paced instruction, computer-managed/assisted instrution, curriculum development, supervisory, and related tasks. Specific tasks selected were suggested largely by the Odom and Roberts task list. Many of the selected tasks could be included in more than one category; however, each task was listed only once. When no additional tasks could be identified, the initial task list was compiled.

The initial task list was reviewed by the principal investigator and other Air Force Human Resources Laboratory (AFHRL) personnel, by the Lowry Instructor Training Branch, and by representatives of McDonnell-Douglas working on a large computer-managed instructional development program at Lowry AFB. All were instructors or curriculum developers experienced in nontra-

ditional instruction. As a result of this review process some tasks were added to the inventory, some tasks were reworded (for clarity), and a few were deleted.

The second draft of the task inventory incorporated the recommendations of the first review. The revised draft was presented to approximately 25 Lowry instructors who were associated with self-paced technical training courses at Lowry AFB. This second stage review by job practioners asked two questions in association with the task list. First, the instructor was asked if the task inventory, as presented, would communicate well enough so that appropriate responses could be made to the items. Then the instructor was asked what tasks, performed in the learning center, did not appear in the inventory. This interaction resulted in the addition of a few tasks and rephrasing of others to improve the communicability of the instrument.

A third version, incorporating the revisions from the previous version, was presented to another group of 12 instructors. The same review process was repeated. Since virtually no changes were then recommended, this version of the inventory tentatively became final (Appendix A).

A coordination visit was made to the USAF Occupational Measurement Center at Lackland AFB, Texas. The purpose was to insure that data collected through this occupational survey questionnaire would be compatible with available data analysis capabilities. Two days were spent working in the Occupational Survey Branch (OMY) in order to expedite the process of refining the questionnaire in such manner as to make most useful the analyses and printouts of the data resulting from the questionnaire. OMY personnel supplied guidance and actively assisted in further refinement of the task inventory. A background information section was developed jointly to allow for efficient coding of the respondents. The background information included identifiers regarded as pertinent to developing training requirements and to the retrieval of data by predetermined groupings. An example of selecting appropriate identifiers was asking for the length of time served as a learning center instructor. These identifiers were designed to enable acquisition of computer printouts based on instructors with 1 to 12 months on the job. Since training requirements were to be based upon job entry tasks, this specific identifier would be particularly important. Further, since in-service training would logically supply training for tasks not performed during the first year, these tasks could also be readily

identified. Minor revisions in the task list were performed with the advice of OMY personnel. These revisions were intended to increase clarity and interpretability of the results and insure that task statements were stated in a "language" acceptable to the Occupational Measurement Center.

Since the coding was to utilize keypunched cards, proper cues were also provided in the instrument. Following editing and review of all inputs (background information, duty/task list, keypunch designators, instructions to respondents), 2,200 copies were printed at Lowry AFB. An opinion survey was added to the inside front cover, while a privacy act statement was added to the inside back cover. This physical arrangement permitted the removal of these portions, after the questionnaire was administered and returned from the field, but prior to forwarding the rest of the questionnaire to the Occupational Measurement Center for processing. A separate analysis of the opinion survey was conducted at Lowry AFB.

#### IV. DESCRIPTION OF QUESTIONNAIRE

The occupational survey, when completed for distribution, consisted of six parts. These six parts were an opinion survey (21 items), general instructions, background information (2 pages), specific instructions, job inventory (12 pages) and a privacy act statement. The complete questionnaire appears as Appendix A.

#### **Opinion Survey**

The first part of the questionnaire consisted of a 21-item opinion survey. This was placed on the inside of the front cover so that these items could be easily removed and separately analyzed. The opinion survey was intended to deal with job incumbents' attitudes toward various activities which were assumed to have reasonably high affective loading. For example, such activities as "apply motivation" and "intervene in learning" cannot be adequately dealt with in a time-spent analysis. Thus those activities identified during the development of the task list as having potentially heavy affective loading were placed in the opinion survey developed by AFHRL/TT. No source list was available. Some specific activities were included in more than one subgroup to enable overall rank order comparisons. The opinion survey is of further interest in that it provides a feel for job incumbents' criticality ratings for various job activities.

#### **General Instructions**

The general instructions were developed by AFHRL/TT. Minimal qualifications for participa-

tion in the survey included being a qualified instructor, holding the present duty AFSC for at least six weeks and spending at least four weeks on the job. The statement of required qualifications was misunderstood by some agencies and blank forms were returned since they did not meet these qualifications when interpreted in a rigid sense.

#### **Background Information**

The background information section asked for information concerning the individual, the employer, gross job description, experience level, level of class preparation, job training, types of testing used in courses, and foreign student participation. In addition, job interest and skill utilization were rated. These items were coordinated with OMY to ensure appropriateness of content, wording, and format. Lackland TC Form 459A (February 1974) was used for presentation of these items.

#### **Specific Instructions**

The standard occupational measurement inventory instructions were adapted to this specific inventory.

#### Job Inventory

The job inventory was composed of 191 tasks distributed among nine categories (labeled as duties). While items could logically be presented in more than one category, each item was presented only once. The nine categories with the number of tasks associated with each are as follows:

- 1. Performing Administrative Duties-35 tasks
- 2. Preparing for instruction-15 tasks
- 3. Testing-16 tasks
- 4. Counseling-14 tasks
- 5. Conducting Self-Paced Instruction-19 tasks
- 6. Conducting Computer Managed or Assisted (Presented) Instruction-23 tasks
  - 7. Developing Curriculum-34 tasks
  - 8. Supervisory-19 tasks
- 9. Teaching Group or Team Activities in an Individualized Instructional Environment-16 tasks

These tasks were coordinated with CMY to insure optimal wording and format. ATC Form 1069 was used to present the job inventory. The respondents were requested to indicate whether or not they performed each task. Each task, if performed, was then rated on a seven-point scale of relative time spent in performing that task.

#### **Privacy Act Statement**

A privacy act statement was prepared since name and social security number were requested of the participants in the survey. This information was vital, however, because it enabled identification of individuals, when necessary, to complete some information omitted by oversight, and to correct apparent errors through direct coordination with the individual respondents.

#### V. ADMINISTRATION OF QUESTIONNAIRE

Agencies offering nontraditional instruction were identified. Thirty-three different agencies (47 sites) were contacted who agreed to participate in the conduct of the survey for the individualized training instructor. These agencies included the Air Force, Army, Navy, Marines and both academic and vocational/technical schools. A short lead time (a little over three weeks) requirement led to the adoption of the personal contact basis for distribution. AFHRL personnel personally contacted, within each cooperating organization, an individual who agreed to become the contact person. This contact person accepted the responsibility for administering and collecting the questionnaire data. The contact person also gave an estimate of the appropriate number of questionnaires that could be completed by his organization. Initially, two to three hundred responses to the questionnaire had been anticipated. Estimates from the personal contacts, however, exceeded 2,000. As a result 2,200 copies were printed, and 2,065 were distributed. A total of 1,119 usable, completed questionnaires were obtained, reviewed and sent to the Occupational Survey Branch for analysis. Follow-up with cooperating organizations determined that many copies were retained by various agencies for reference use since no other current task list was available. Some of the instruments failed to arrive at the destination (or arrived too late to meet the short time frame). Other agencies overestimated the number of respondents available to them. Forty-three completed questionnaires were unusable due to a variety of respondent errors. The high response rate within the very short time frame can in large part be attributed to numerous telephone follow-up contacts with each of the 47 sites involved in the survey. The administration of the survey questionnaires occurred between November 1975 and December 1975.

#### VI. ANALYSES AND CONCLUSIONS

Four separate areas were analyzed. These were the opinion survey, the task performance data, the occupational survey report, and time accounting in completion of the project. Manhours expended are given in Appendix B.

#### **Opinion Survey**

Four activity groups were ranked by 970 survey participants as to criticality. Each activity group was ranked independently; however, paired items were used so that some general overall rankings could be inferred. Table 1 indicates the items, mean rank with the activity, rank frequency of responses, and location of paired items.

Highest ranking activity was staying current in the technical specialty, followed by establishing a positive learning environment and intervening at the appropriate time in the learning process. The three least critical activities in individualized instruction were conforming with the intent of the privacy act, enforcing rules of dress and appearance and attending job-related civilian schools at personal expense. These results should be interpreted generally, however, since levels of significance of rank order differences were not computed.

This effort, while of interest, did not provide a direct contribution in the development of training requirements. It would be of interest to determine how the training decisions relate to these opinions of learning center instructors. Managers of learning centers will find the opinion survey results of interest and assistance.

#### **Task Performance Data**

The task performance data from the entire usable sample is contained in Table 2.

The 191 tasks were rated by 1,119 job incumbents. The same data file has provided 25 different analyses, which were used later in the various phases of the overall curriculum development project. It must be emphasized that different subgroups when analyzed show considerable differences in results. These analyzed data provided the empirical base for determining training requirements.

#### Occupational Survey Report

The occupational survey report based upon the questionnaire data is contained as Appendix C.

Table 1. Opinion Survey Results

Activity Group						Rank Fr	Rank Frequency (%)	(%		
Percent   Contract	Rank in Group	Ref	Item Description	-	7	e	•	ın		Paired
Establish positive learning environment	Activity	Group I (Iter								
2 Apply motivation techniques appropriate to 3 Establish and maintain rapport with students 4 Evidence fairness, tast, and good judgment 5 Exhibit professional attitude to assigned 6 Establish professional attitude to assigned 7.1 17.5 30.6 30.0 14.7 - 7.1 17.5 30.6 30.0 14.7 - 7.1 17.5 30.6 30.0 14.7 - 7.2 13.5 14.1 18.0 38.8 - 8 Anthor non-assigned duties 6 Establish professional attitude to assigned 7 Attend professional inservice training 8 Stay current in technical specialty 9 Attend job-related civilian schools at rown own expense 10 Attend job-related civilian schools at rown own expense 11 Encourage safe behavior beyond that specified 12 Discriminate between normal and deviant behavior in the classroom with intent of the privacy act 14 Stay 25.2 36.4 17.4 8.7 1.1 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2	1.989	-	Establish positive learning environment	47.3	25.3	13.6	8.9	4.9	1	1
Stell-paced instruction with students   15,2 27,1 21,6 18,1 17,8   14,9 24,8 23,6   14,7   15,9 30,6 30,0 14,7   15,9 30,6 30,0 14,7   15,9 30,6 30,0 14,7   17,9 30,6 30,0 14,7   17,9 30,0 14,7   17,9 30,6 30,0 14,7   17,9 30,6 30,0 14,7   17,9 30,6 30,0 14,7   17,9 30,0 14,7   17,9 30,0 14,7   17,9 30,0 14,7   17,9 30,0 14,7   18,0 38,8   18,1 18,0 18,8   18,1 18,0 18,8   18,1 18,0 18,8   18,1 18,0 18,8   18,1 18,0 18,8   18,1 18,0 18,8   18,1 18,0 18,8   18,1 18,0 18,8   18,1 18,0 18,8   18,1 18,0 18,8   18,1 18,0 18,8   18,1 18,0 18,8   18,1 18,0 18,1 18,0 18,1 18,1 18,0 18,1 18,1	2.967	7	Apply motivation techniques appropriate to							
# Exhibit professional attitude to assigned and maintain rapport with students 5  Exhibit professional attitude to assigned and an annian rapport with students 5  Exhibit professional attitude to assigned and annian rapport with students 6 – 10)    Course environment and advant behavior and nontainal reservice training service se	1		self-paced instruction	15.2	27.1	21.6	18.1	17.8	1	16
Comp	3.255	m •	Establish and maintain rapport with students	14.9	16.7	19.9	24.8	23.6	1	19
Y Group II (Items 6 – 10)         Establish professional arising of uties         15.5         13.5         14.1         18.0         38.8         –           6         Establish professional duties         2.5         10.0         32.0         25.1         30.5         –           7         Action d professional in-service training         2.5         10.0         32.0         25.1         30.5         –           8         Stay current in technical specialty         82.7         11.9         3.6         14         .4         –           9         Attend porfessional in-service training         82.7         11.9         3.6         14         .4         –           10         Attend job-related civilian schools at many own expense         2.0         8.5         46.7         37.7         5.1         –           10         Attend job-related civilian schools at many schools at many own expense         2.0         8.5         46.7         37.7         5.1         –           11         Attend job-related civilian schools at many schools at	3.514	4 v	Evidence rairness, tact, and good judgment	1.1	17.5	30.0	30.0	14./	1	1
y Group II (Items 6 – 10)           6         Establish professional contacts outside         2.5         10.0         32.0         25.1         30.5         —           7         Attend professional in-service training         8         7.7         12.3         4.6         2.7         —         4.6         2.7         —         2.7         1.9         3.6         1.4         -         4         —         —         2.7         1.9         3.7         3.7         5.1         —         4         —         —         2.7         1.9         3.4         3.7         3.7         —         2.7         1.4         -         4         —         —         -         4         —         -         4         —         -	11000	,	and non-assigned duties	15.5	13.5	14.1	18.0	38.8	1	1
6 Establish professional contacts outside 2.5 10.0 32.0 25.1 30.5 - 2.7 67.7 12.3 4.6 2.7 - 8 Attend professional in-service training 9 Attend professional in-service training 10 Attend iob-elated civilian schools at 11 Attend iob-elated civilian schools at 12 Attend iob-elated civilian schools at 13 Attend iob-elated civilian schools at 14 Encourage safe behavior beyond that specified 15 Discriminate between normal and deviant behavior in the classroom 16 Apply motivation techniques appropriate to 17 Stay current in technical specialty 18 Discriminate between normal and deviant behavior 19 Establish and maintain rapport with students 10 Establish and maintain rapport with students 10 Establish and maintain rapport with students 11 Establish and maintain rapport with students 12 Stay current in technical specialty 13 Establish and maintain rapport with students 14 Establish and maintain rapport with students 15 Establish and maintain rapport with students 16 Establish and maintain rapport with students 17 Establish and maintain rapport with students 18 Establish and maintain rapport with students 19 Establish and maintain rapport with students 10 Enforce rules of dress and appearance review of the study habits 20 Enforce rules of Gress and appearance review of the study habits 21 Establish professional and evaluate the professional appearance review of dress and appearance review of the study habits 21 Establish and maintain rapport with students 22 Enforce rules of dress and appearance review	Activity	Group II (Ite								
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Attend professional in-service training   12.7   67.7   12.3   46   2.7			course environment	2.5	10.0	32.0	25.1	30.5	1	1
Attend job-related civilian schools at government expense     Attend job-related job-related schools at government expense     Attend job-related job-related schools at government expense     Attend job-related job-related schools at government     Attend job-related job-related schools at	2.169	-	Attend professional in service training	12.7	67.7	12.3	4.6	2.7	1	1 !
Attend job-related civilian schools at a government expense   10	1.251	<b>∞</b> 0	Stay current in technical specialty	82.7	11.9	3.6	1.4	4.	1	17
O   Attend job-related civilian schools at my own expense	3.338	6	Attend job-related civilian schools at	00	8	147	27.7			
y Group III (Items 11 – 15)  11 Encourage safe behavior beyond that specified by course documents 12 Discriminate between normal and deviant behavior in the classroom 13 Conform with intent of the privacy act 14 P. S.	4.518	10	Attend job-related civilian schools at	2.4	?	2	:	::		
y Group III (Items 11 – 15)  11 Encourage safe behavior beyond that specified by course documents 12 Discriminate between normal and deviant behavior in the classroom 13 Conform with intent of the privacy act 124 25.2 36.4 17.4 8.7 - 4.8 12.1 15.2 32.8 34.9 - 1.8 1.2 11.2 1.5 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2			my own expense	7:	1.9	5.4	31.1	61.4	1	1
11   Encourage safe behavior beyond that specified by course documents   12   Discriminate between normal and deviant behavior   12.4   25.2   36.4   17.4   8.7   -     13	Activity	Group III (It	ems 11 – 15)							
12 Discriminate between normal and deviant behavior in the classroom  13 Conform with intent of the privacy act 14 Enforce rules of dress and appearance 15 Intervene at the appropriate time in the learning process  14 Enforce rules of dress and appearance 15 Intervene at the appropriate time in the learning process  15 Intervene at the appropriate time in the learning process  16 Apply motivation techniques appropriate to self-paced instruction 17 Stay current in technical specialty 18 Discriminate between normal and deviant behavior in the classroom 16 Establish and maintain rapport with students 16 Intervene 17 Intervene 18 Intervene 19 Interven	2.330	==	Encourage safe behavior beyond that specified							
12 Discriminate between normal and deviant behavior   12.4   25.2   36.4   17.4   8.7   -     13	0,00	,	by course documents	33.3	9.92	50.6	12.8	6.7	1	1
13   Conform with intent of the privacy act   12.1   15.2   15.1   15.4   44.3   -	7.848	12	Discriminate between normal and deviant behavior	10.4	25.3	7 76	17.4	0 7		9
Enforce rules of dress and appearance   4.8   12.1   15.2   32.8   34.9	3.999	13	Conform with intent of the privacy act	4.9	2.8	13.1	29.4	44.3	1 1	9 1
15   Intervene at the appropriate time in the learning process   15   Intervene at the appropriate time in the learning process   16   14.5	3.815	14	Enforce rules of dress and appearance	4.8	12.1	15.2	32.8	34.9	1	20
y Group IV (Items 16 – 21)         44.5         28.0         14.3         7.6         5.3         –           16         Apply motivation techniques appropriate to self-paced instruction         28.8         34.2         17.3         10.5         5.7         3.5           17         Stay current in technical specialty         45.2         21.5         16.5         9.5         4.8         2.8           18         Discriminate between normal and deviant behavior in the classroom         1.6         4.6         14.1         27.4         36.4         15.8           19         Establish and maintain rapport with students         16.3         17.2         19.0         19.7         20.0         7.8           20         Enforce rules of dress and appearance         7         2.4         5.9         9.3         17.8         63.9           21         Recognize ineffective study habits         7.4         20.3         27.1         23.7         15.2         6.3	2.016	15	Intervene at the appropriate time in							
y Group IV (Items 16 – 21)  16 Apply motivation techniques appropriate to self-paced instruction 17 Stay current in technical specialty 18 Discriminate between normal and deviant behavior in the classroom 19 Establish and maintain rapport with students 20 Enforce rules of dress and appearance 21 Recognize ineffective study habits 21 Recognize ineffective study habits 28 34.2 17.3 10.5 5.7 3.5 4.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2			the learning process	44.5	28.0	14.3	7.6	5.3	1	1
16 Apply motivation techniques appropriate to self-paced instruction  17 Stay current in technical specialty 18 Discriminate between normal and deviant behavior in the classroom 19 Establish and maintain rapport with students 28.8 34.2 17.3 10.5 5.7 3.5 4.8 2.8 16.4 16.5 9.5 4.8 2.8 16.5 17.2 19.0 19.7 20.0 7.8 17.8 2.9 9.3 17.8 63.9 20 Enforce rules of dress and appearance 21 Recognize ineffective study habits 22 Recognize ineffective study habits	Activity	Group IV (It	ems 16 – 21)							
17       Stay current in technical specialty       28.8       34.2       17.3       10.5       5.7       3.5         18       Discriminate between normal and deviant behavior in the classroom       1.6       4.6       14.1       27.4       36.4       15.8         19       Establish and maintain rapport with students       16.3       17.2       19.0       19.7       20.0       7.8         20       Enforce rules of dress and appearance       7.4       20.3       27.1       23.7       15.2       6.3         21       Recognize ineffective study habits       7.4       20.3       27.1       23.7       15.2       6.3	2.406	16	Apply motivation techniques appropriate to							
17       Stay current in technical specialty       45.2       21.5       16.5       9.5       4.8       2.8         18       Discriminate between normal and deviant behavior in the classroom       1.6       4.6       14.1       27.4       36.4       15.8         19       Establish and maintain rapport with students 20       16.3       17.2       19.0       19.7       20.0       7.8         20       Enforce rules of dress and appearance 21       7.4       20.3       27.1       23.7       15.2       6.3			self-paced instruction	28.8	34.2	17.3	10.5	5.7	3.5	7
18 Discriminate between normal and deviant behavior 1.6 4.6 14.1 27.4 36.4 15.8 in the classroom  19 Establish and maintain rapport with students 16.3 17.2 19.0 19.7 20.0 7.8 20 Enforce rules of dress and appearance 7.7 2.4 5.9 9.3 17.8 63.9 21 Recognize ineffective study habits 7.4 20.3 27.1 23.7 15.2 6.3	2.147	17	Stay current in technical specialty	45.2	21.5	16.5	9.5	4.8	2.8	∞
19 Establish and maintain rapport with students 16.3 17.2 19.0 19.7 20.0 7.8 20 Enforce rules of dress and appearance 21 Recognize ineffective study habits 7.4 20.3 27.1 23.7 15.2 6.3	4.396	18	Discriminate between normal and deviant behavior							;
20 Enforce rules of dress and appearance 7.7 2.4 5.9 9.3 17.8 63.9 21 Recognize ineffective study habits 7.4 20.3 27.1 23.7 15.2 6.3	2 224	9	in the classroom	1.6	6.6	14.1	27.4	36.4	15.8	12
21 Recognize ineffective study habits 7.4 20.3 27.1 23.7 15.2 6.3	5 270	25	Establish and maintain rapport with students	16.3	7.77	0.6	19.7	20.0	8.0	n :
According metrocities and matrix 17.4 20.3 21.1 23.1 13.2 0.3	3 377	3.5	Paccomize ineffective childy habite	7.7	4.70	7.50	35	17.0	6.50	4
	1100	17	Necognize menecuve study naons	t. /	50.7	1.17	7.67	13.2	0.3	1

Table 2. All Personnel Responding Task Performance Data

DUTY AND TASK PENFO	50.	GROUP, BASED ON BACKGROUND		
ESCENDING ORDE	1	CTOM GROUP CAREER FIELD. TASKS ARE E SPENT BY ALL GROUP HENBERS.		
DUTY JOB DESCRIPTION CA	CASES TASKS	DUTIES HBRS		
	=	ala.	•	
O O	CUMULATIVE SUM	OF AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	ERS	
AV PE		TIME SPENT BY MEMBERS PERFORMING.		
D-15K	DUTY/TASK TITLE	3	*	
A PERENTALING ADMINISTRATIVE	E DUTIES	71.67		
PREPAGING F	2	!	12	
396403	STRUCTION	1	1	
שנונים באווים בחשבו במרחש		73.01 12.72	9.28 87.96	1
I TERCATAG GACOP OR TEAM ACTI	ACTIVITIES IN	AN INDIVIDUALIZED	5.35 93.34	i
TING COMP	GED OR ASSISTED	TED (PRESENTED) 26.18 13.03	3.41 96.75	1
NOTIONAL RANGE A		60.84		
	576		1	1 !
•	100	Total Somple		
	002			1
	!		L	1
	600	All Military - Excluding Air Force 2	247	1.
	100	Civilians - Non-Department of Defense	3	
	\$99	Computer Managed		. 1
	900	ATC Instructors and Curriculus Davalopers		1
	. 007	ATC Instructor Supervisor	=	
	800	ATC Instructors 6	625	
	600	UPT Instructors		1
•	010	All Instructors 10	1017	
	9110	Self-Paced (Non-Conputer)	888	
	012	USAF Instructors		
	ຄູ	All Arc Perconnel	189	
	910	ATC Curriculus Developers	2	

TASK JOS DESCRIPTION	CASES. TASKS DUTIES	S					
	AVE	PERCENT TIME	8	ALL HEMBERS.	R5		TASK
	PEACENT TIM	BY MEMBERS	Z.	9			20.
D-TSK	SK TITLE		• •	• •			• •
	STUDENTS TO DRSFBVF STUDENT PROGRESS	PROGRESS	90.04	2.80	(16.6	2.21	
INOT RECORDED!			1	-			
USE CFFICIAL	PUBLICATIONS SUCH AS TECHNICAL ORDERS	L ORDERS.	74.08	2.59	1.92	6009	1
REGULATIONS							1
FOR STUDENT	COLITONALISTUDI MATERIALS ARE	ARE AVAILABLE	83.56	211.7	1.11	7.86	
1	CONCERNING TRAINING PROGRES	ESS	79.09	2.12	1.68	9.54	5
53	OR JOB-RELATED HATERIALS		73.91	2.24	1.66	1.20	
. 99 TUTOR IN	STUDENTS		68.28	2.40	1 .64 1	2.84	
74 COUNSEL STUDENTS	CONCERNING LEASING DIFFICULTY	כחר זא	80.07	1.95	1.56	9	
1 ACCOUNT FOR	STUNENTS (EG. TAKE ATTENDANCE)		85.17	1.66	1.42	7.25	9
67 COUNSEL STUD	G ATT		79.89	1.76		8.66	1
THAT IL	TIO :: S FOR UPERATING	CLASSROOM EQUIP-	70.24	1.87	1:31	9.97	
A 1.	ABLE TO STUDENTS TOWAL\STUDY MATERIALS SUCH	SUCH AS STUDY GUIDES.	70+15	1.84	1.29 2	21.26	
20	TRAINING AIDS	AS PROJECTORS.	64.99		1.28 2	22.54	
SAND	DY HEALS OF PERFORMANCE	TYPES OF TESTS	54.96	2.27		23.79	. 5
< 2	ww	AUDIO-VISUALS, AND	63.63		1.22	25.01	4
PROGRAMMED TEXTS	TRATHING COMMENT	ACCURACY, ETC		1	:		
25 MA1 11 11 FIL	STUDENT	KTS	56.30	2015	1.21	27.43	1
SS CONDUCT CRITIQUE	TEST RESULTS W	ENTS	05.09	1.99	-	28.64	
B 42 [1.503E THAT CRIT!	TOUR FORMS, OR OTHER SIMILAR	AR DOCUMENTS.	73.91	1.59	1.18	29.81	20
SE TRAINI	AREA ICLASSROOM	LEARNING CENTER, LAB.	66.93	1.75	11.17	30.99	
1	TINITE PLINE		-				

	DUITYTASK TITLE		SPCOO	SPCOOT PAGE	2	
	TISSUAL DESUATE LIGHT, HEAT, AND OTHER HEALTHYSAFETY	70.69	19.1	1:1	33.26	
	553	41.09	1.87	CITT	34.39	
	IN PRETATE FOR CLASS THEREVERE TH THE LEARNING PROCESS TO INFORMALLY DETERMINE STUDENT PROGRESS	55,76	2.01	1.12	35.51	52
	ADHIVISTER PERFORMANCE TYPES OF TESTS DURING OR AT THE	52.90	2.11	1.12	36.63	
- 1	53	67.20	1.66	===	37.74	
	CONDUCT STUDENT DRIENTATION	65.95	1.68	=	38.85	
	RESULTS JAEN STUDENT	53.80	2.04	01.1	41.05	30
2	POINTS (EST PROGRESS CHECKS AND TEACHING STEP ASSESSMENTS) EVALUATE STUDENTS OF REANS OF KRITTEN TESTS DURING OR AT	54.51	1.97	1.07	42.12	
THE	COURSES					
2 64	FULLUATOR AFILE COURSELING STUDENTS DISTRIBUTENACCOUNT FOR TRAIMING MATERIALSNEQUIPMENT	63.00	1.65	• 0 • 1	43.18	
-	"ATTTEN	20.67	2.04	1.04	45.26	
-		60.14	1.72	1.03	46.29	35
	FARTARE STOREM COMPACTING REPORTS/RECORDS  EVALUATE WAITTER TESTS AND SUGGESTIMAKE REVISIONS	58.89	1.75	1.02	48.35	
-	SH CL	95.29	1.56	. 47	49.32	
56	COUNSEL STUDENTS CONCERNING CAREER DEVELOPMENT	56.48	2	96.	50.28	
2 2	DETAILS TO	48.26	1001	* 6 .	52.16	•
=	JEST10	47.01	1.98	. 93	53.09	
POST	(RECORD) TEST SCORES.	49.51	1.85	265	54.01	
: =	CHARGE, PROFICICIST ADVANCEMENT,	11.70		?	24.40	
5	ENTS CONCERNING	55.14	1.60	.88	55.79	45
	TECHTICAL ACCURACE CHECK INSTRUCTIONS FOR CLARITY. TECHTICAL ACCURACY, ETC. AND SUGGESTINAKE REVISIONS	50.22	1.74	. 87	26.66	
-	COTAL TRAINING FOR STUDENTS ON	45.58	1.92	.87	57.53	
2 -	2 m	63.18	1 • 35	. 85		
ù ō	WSPECTOR	45.13	1.87	. 8	59.23	
= 10		50.94	1.63	.83	\$0.09	05
= =		49.87	1.65	.82	60.09	
15 01	IDS OR CHARTS	46.74	1.70	.70	62.49	

IE	15.58	1.73	. 19	63.20	1
COUNSEL STUDENTS CONCERNING ELIHINATION	52.73	1.43	.75	64.03	55
	15.67	1.60	.73	94.76	
75 COURSEL STUDENTS CONCERNING VALUES	48.35	1.50	.73	94.59	
E PROG	33.33	2.16	.72	66.21	
TOENTIFY PROBLEM READENS AND MAKE REFE	48.17	1.48	.71	26.99	
1 184 COADUCT REMEDIAL THAINING FOR A GROUP OR GROUPS OF STU-	38.61	1.76	. 68	9.7.	9
DENTS IN AN INDIVIDUALIZED INSTRUCTIONAL ENVIRONMENT			-		1
A 18 MAINTAINNCONTROL EXAMINATION FILES	36.91	1.82	.67	68.27	
FELATE	İ	1.56	99.	68.93	
SOUALIZED LESSON PLANS		1.77	99.	45.49	1
STUDENT WELFARE, DISCIPLINE, OR OTHER ACTIONS	1	16.1	. 62	70.20	
AONS OF OTHER AGENCIES					
RECORD_RESU	39.77	1.49	.59	70.80	59
LES OF (		19.1	.58	71.38	
B 40 ATTENS JOB-RELATED COURSES OFF-DUTY		2.03	.58	71.96	
	25.38	2.17	. 55	12.51	
AN INDIVIDUALIZED INSTRUCTIONAL ENVIR			-		
	36.28	1.48	.54	73.05	
ING COJECTIVES		1.75	.53	73.58	70
6 46 PERFORM OPERATIONAL CHECKS ON AUDIO-VISUAL COURSEMARE	33.96	1.56	.53	74.11	
2000			:	. :	
TABLE	700/2	10,00	• 53	74.63	1
COURSE	37.18	1.41	.52	75.16	
-		1 . 80	• 50	75.66	
DWSTRA		2.00	.47	76.13	75
AN INDIVIDUALIZED INSTRUCTIONAL, ENVIRONMENT		1	1.		
97 SHOK AUDIO-	-	1.41	. 47	76.60	
140 DEVELOPINEVISE PROGRAFIMED TEXT	20	1.82	94.	77.06	
90 HOWITOR PEER INSTRUCTION	30.47	1.48	. 45	77.51	
TRAINERSATRAINI	31.28	1.44	. 45	77.96	
31 BOSBASE CTIDE AT CARTIE BEBRETE	1	1	-		1
THE TEN OFFICE DISCHARMS AND THE TENEST OF T		700		78.40	8
TATE TO THE TATE OF THE TATE O	1	2.51		78.84	
INDIVIDUALIZED INSTRUCTIONAL ENVIRONMENT	20.91	1.96	7	19.25	
A 4 ASSESS (*1THOUT TESTING) QUALIFICATIONS OF NEW STUDENTS BY FERSONAL INTERVIEW	28.06	1.4	0+0	29.62	
TO THE TRATTON LESSON NOT CALLED FOR BY LESSON PLAN	23.77	1.70	.40	90.08	
INITIATE PEER LUSTHUCTION	28.51	1.40	. 40	80.45	9

13 CONTACT MAINT PERSONNEL FOR OTHER THAN AUTHORIZED MINOR MAINT ON TRAINERSYTRAINING FOURE EXCLUDING COMPUTERS	30.21	1.28	.39	81.23	-
SKETCH, COMPOSE OR ADVISE	20.20	1.86	.38	19-18	-
TIBST CONDUCT LECTURE NOT CALLED FOR BY LESSON PLAN IN AN INDIVIDUALIZED INSTRUCTIONAL ENVIRONMENT	21.18	1.73	.37	81.97	
ENTAT	26:09	1.40	.36	82.34	06
HOUT TESTINGS QUALIFICAT	28.33	1.28	•36	82.70	
G READING COMP, AGE AND 14 SCORES, E T STUDENTS TO TRACKS OR MODULES BASE	22.61	1.59	.36	83.06	
PREVIOUS PERFORMANCE, PRE-TESTS AND RECORDS REVIEW	33.46	1.50	25	19.00	
~	24.40	1 . 45	.35	83.77	
ESTABLISH INSTRUCTIONAL SENDENCE, METHODS, MEDIA (FOR	21.81	1.60	.35	84.11	95
CHECK STUDENT TEST FORMS, WORKSHEETS AND AUMINISTRATIVE	15.01	2.20	.33	84.48	
FOR FORMAT PRIOR TO MACHINE					
LES OF COURSE CONTROL DOCU	23.50	1.40	• 33	84.77	
TUDENTS FOR DUTY AS CLASS LEADERS	25.65	1.26	.32	85.10	
OUTLIZED INSTRUCTIONAL ENVIRONMENT	18.05	1.79	•32	85.42	-
OF SEVIENTAPPROVE CURRICULUM MATERIALS CURING DEVELOPMENT	17.07	1.88	.32	85.74	100
OVE STUDENTS FOR DUTY	26.09	1.23	.32	86.06	
TOCK FILLS OF RESTOENT TRA	21.36	1.49	.32	86.38	
PATOR TO THSTRUCTION	20.29	1.56	.32	86.70	
. > 1	15.64	1.96	.31	87.00	
DESIGN SLIDES OR TRANSPARENCIES	18.68	1.64	.31	87.31	105
HUCTORS TO ROLE	18.14	1.63	.30	87.61	
TEKTON PERFORMANCE EVALUATION TAS	20-11	1.37	• 28	87.88	
	14.03	1.88	• 50	88 . 15	
DATE TO DOIT POSITIONS	14.92	1.76	.26	88.41	-
FORM CIRCLALLIANCE NOT NOT NEED INC.	18.86	1.34	• 26	88.67	0=
1401	10.35		92.	88.43	-
ATTERS INSTRUCTOR TRAINING COURSES OFF-DUTY	15.01	1.71	• 26	89.19	
ATING STANDARDS OR OTHER DEVICES HEED TO FULL	99.5		• 26	89.44	
NT PERFORMANCE DURING PAG	1	200		2	-
HAL OUTTHE-JOB TRAINING 10JT)	15.10	1.68	. 25	89.95	115
C 60 EVALUATE STUDENTS BY MEANS OF PRE-TESTS WHICH MEASURE JOB	15.73	1.58	. 25	90.20	
14	UN. 71	-48	36.	40.00	1

FUR PRUGRANED HATERIALS  BALLEND STUDENTS FOR INTECONNEND STUDENTS FOR INTECONNEND INSTRUCTORS FOR INSTRUCTORS FOR INSTRUCTORS FOR INSTRUCTORS FOR INSTRUCTORS FOR INSTRUCTOR EXALTS IN PROTICE TRANSPORT IN PROTICE TO STUDENTS IN PROFICE TO STUDENT INSTRUCTOR EVALUATION TO STUDENT INSTRUCTOR EVALUATION TO STUDENT INSTRUCTOR FOR INSTRUCTOR FOR INSTRUCTOR FOR INSTRUCTOR FOR INSTRUCTOR FOR INSTRUCTOR FOR INSTRUCTOR A STATE TO STUDENT ENANCE OF STUDENT ENANCE OF STUDENT ENANCE IN THE INSTRUCTOR IN TH	D-TSK TITLE		-	SPC0	SPCOOL PAGE	-	
FUNDAMEND STORETS FOR THISTRUCTOR ADES  RECONMEND STORETS FOR THISTRUCTOR ADES  RECONMEND STORETS FOR THISTRUCTOR ADES  NATERIAL STORETS FOR THISTRUCTOR ADES  NATERIAL STORETS FOR THISTRUCTOR TRAINING 15.02 15.7 22 91.55  NATIONAL STORETS FOR THISTRUCTOR THISTRUCTOR ADES  NATIONAL STORETS FOR THISTRUCTOR THISTRUCTOR ADES  NATIONAL STORETS FOR THISTRUCTOR THISTRUCT	CONDUCT AND RECORD RESULTS OF SHALLNLARGE	SROUP TRYOUTS	19.48	1.27	.25	90.70	
RECONDENS TO STORETTS FOR INSTITUTION OF TRAINING. 15-02 1-37 -22 91-35 ALTERNATES DURING DEVELOPMENT OF TRAINING. 15-02 1-37 -22 91-35 ALTERNATES DURING DEVELOPMENT OF TRAINING. 15-02 1-37 -22 91-35 ALTERNATES DURING DEVELOPMENT OF TRAINING. 15-02 1-37 -22 91-35 ALTERNATES DURING DESCRIPTION OF TRAINING SESSIONS 113-05 1-44 -22 91-35 CONDUCTOR OF TRAINING SESSIONS 113-05 1-54 1-2 91-30 CONDUCTOR OF TRAINING SESSIONS 113-05 1-7 1-7 91-30 CONDUCTOR OF TRAINING SESSIONS 113-05 CONDUCTOR OF TRA	FUR PRUGRANIED HATERIALS			-			
CORPETE TAX PERFORMANCES UNTING DEVILOPMENT OF TRAINING. 15-02 1-37 -22 91-35  EVALUATE TAXOUT RESULTS DURING DEVILOPMENT OF TRAINING. 15-02 1-37 -22 91-35  EVALUATE TAXOUT RESULTS DURING DEVILOPMENT OF TRAINING. 15-19 1-47 -22 91-39  EVALUATE TAXOUT RESULTS DURING DEVILOPMENT OF TRAINING. 15-19 1-47 -22 91-39  EVALUATE TAXOUT RESULTS DIRIGING DEVILOPMENT OF TRAINING TAXOUT TAXOUT TO PROPER USE OF REPORDER UNITS TAXOUT	RECOMMEND STUDENTS FOR INSTRUCTOR		18.77	1.25	• 23	90.93	
SERVENCE TSK PERFORMANCES DURING DEVELOPMENT OF TRAINING. 15.02 1.37 .22 91.37  BATERILES  EVALUATE TROUGH RESULTS DURING DEVELOPMENT OF TRAINING. 15.02 1.47 .22 91.50  EVALUATE TROUGH RESULTS DURING DEVELOPMENT OF 13.76 1.61 1.30 1.31 1.32 1.32 1.32 1.32 1.32 1.32 1.32	RECOMPEND 1		14.03	1.57	.22	91.15	120
### FAULTE TROUT RESULTS DURING DEVELOPMENT OF 15-19 1-42 -22 91-50 15-13 15-10 15-1	OBSCRVE TASK PERFORMANCES	TOF TRAINING	15.82	1.37	.22.	91.37	
EVALUATE TRADUIS RECUELTS EVALUATION TO THE SERVICE TRADUIS SERVICE EVALUATION TO THE SERVICE TRADUIS EVALUATION TO THE SERVICE TRADUIS EVALUATION OF COUNTER IS DOWN  INSTRUCT STUDENTS EVALUATION TO THE SERVICE TRADUIS EVALUATION OF COUNTER IS DOWN  INSTRUCT STUDENTS EVALUATION TO THE SERVICE TRADUIS SEVICES  INSTRUCTOR  INS	MATERTALS						
INSTRUCTORAL MATERIALS   19.00   1.04   .21   9.00   1.05   .21   9.00   1.05   .21   9.00   1.05   .21   9.00   1.05   .21   9.00   1.05   .21   9.00   1.05   .21   9.00   1.05   .21   9.00   1.05   1.05   .21   9.00   1.05   1.05   .21   9.00   1.05	EVALUATE TRYOUT		15.19	1 - 42	.22	91.50	
CONDUCT SCREENING TRANSPORDER UNITS GRAND STATE TO THE STATE TO THE STATE TRANSPORDER UNITS STATE TRAN	LIONAL						
UNIVERSESTED   UNIVERSESSESSESSESSESSESSESSESSESSESSESSESSE	EVALUATE GRADING PRACTICES		13.05	1.64	.21	91.80	
INSTRUCT STUDENTS IN PROPER USE OF RESPONDE UNITS   COUNCITEDATE   STUDENTS   COUNTY   CONTINUES	COMPLETE HANHOUR ACCOUNTING RECORDS		13.76	1.51	.21	92.01	
TOUGHT CONTRICTANT IN STRUCTOR IN SERVICE TRAINING SESSIONS 15.40 1.54 .21 92.42 42 ASSTRUCTOR IN STRUCTOR STRUCTO	INSTRUCT STUDENTS IN PROPER USF OF R		15.01	1.38	.21	92.21	125
PARTICIPATE IN DOCUMENTED EXPENSED STUDIES  ASSIGN REMEDIATION TO STUDENTS AMEN COMPUTER IS DOWN  INSTRUCTION   CONDUCTIVECHEDULE INSTRUCTOR IN-SFRVICE	INING SESSIONS	13.40	1.54		62.42		
TABLE   TABL	PANTICIPATE IN DOCUMENTED EXPERIMENTAL	9168	16.53	1.23	. 20	92.62	
TABLE   TOTAL   COCCUENTED   EVALUATION OF COURSES OF   14.05   141   20   51.02     MATRIC   CONTRECT   CALLATION OF COURSES OF   14.05   134   20   51.02     MATRIC   CALLATION   CALCATION   CAL	ASSIGN AEMEDIATION TO STUDENTS MAEN	R. IS DOWN	29.11	1.73	. 20	92.82	1
INTERPRETED SCATTERGRANS (OR OTHER TEST ANALYSIS DEVICES)   14.66   1.34   .20   93.22     INTERPRETE SCATTERGRANS (OR OTHER TEST ANALYSIS DEVICES)   14.66   1.34   .20   93.22     EGGORN TASTRUCTOR PROFICIENCY RECORD (EG. AF FORM 423)   12.74   1.79   1.79   1.70     ALTI HASTRUCTOR PROFICIENCY RECORD (EG. AF FORM 423)   12.74   1.79   1.79     ALTI HASTRUCTOR PROFICIENCY RECORD (EG. AF FORM 423)   12.75   1.29   1.79     ALTI HASTRUCTOR PROFICIENCY RECORD (EG. AF FORM 423)   12.70   1.70     ALTI HASTRUCTOR PROFICIENCY RECORD (EG. AF FORM 423)   12.70   1.70   1.70     ALTI HAST RECLUS TO STUDENT TO BE TO STUDENT STANDERS   12.70   1.70   1.70   1.70     ALTI HAST RECLUS TO STUDENT STANDERS   11.70   1.70   1.70   1.70     ALTI HAST RECLUS TO STUDENT STANDERS   11.70   1.70   1.70   1.70     ALTI HASTRUCTOR STANDER STANDERS   1.70   1.70   1.70   1.70     ALTI HASTRUCTOR STANDER STANDER STANDERS   1.70   1.70   1.70   1.70     ALTI HASTRUCTOR STANDER STAND	MAL (DOCUMENTED) EVALUATI	COURSES OF	14.03	1.	.20	93.02	
INTERPRET SCATTERGAS-S OR OTHER TEST AMALYSIS DEVICES    19.66   1.34   .20   93.22	TOW						İ
STRUCTOR EVALUATION (ATC FORM 201)  12.76   154   20 93.40  NSTRUCTOR PROFICIENCY RECORD (EG. AF FORM 623, 10.61 1.74   19 93.60  NSTRUCTOR PROFICIENCY RECORD (EG. AF FORM 623, 10.61 1.74   19 93.60  AUTO A 10ES  OFT CIENCY LEVELS FOR TRAINING ITEMS	SCATTERGRAMS 10R	15	14.66	1.34	• 20	93.22	130
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OVERAIDENADJUST COMPITER PRESCRIPTIONS	7.24	1.65	.12	97.60	1
CENTIFY PERSONNE	7.77	1.50		97.72	8
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33 REASSIGN MALTASSIGNED STUDENTS	4.47	1.09	•10	48.47	
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180 CONDUCT GAMING EXERCISE (EG. ROLF	5.36			98.86	130
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F 111 INSURE THAT STUDENTS RECEIVE COMPUTER ASSIGNED ALTER-	4.56	1 . 40	.007	99.32	
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H 157 ARRIVGE	H 157 AREFAGE FOR DOCUMENTED EXPERIMENTAL STUDIES	3.66	3.64 1.17 .04 99.79 188	.0.	66.79	185
F 116 PERFORM	AUTHORIZED TROUBLESHOOTING OF COMPUTER	2.32	1.69	.0.	99.83	
FICE INPUT RE	F 108 1NPUT RESOURCES AVAILABILITY DATA TO COMPUTER	2.50	2.50 1.51 .04 99.67	*0.	49.87	
F 115 PERFORM	F 115 PERFORM AUTHORIZED MINOR MAINTENANCE OF COMPUTER	2.86	2.86 1.17 .03 99.90	.03	99.90	
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6 151 PREPARE COURSE	COURSE ANNOUNCEMENTS FOR PUBLICATION (EG. AFM 50-5	1.88	1.88 .74 .01 99.97	10.	89.97	
YTTANHUNITY						

This is a specialized summary of the results of the functional structure of the entire survey sample. The data were analyzed, reviewed, and approved by the Occupational Measurement Center at Lackland AFB.

The job structure was determined on the basis of similarity in task performance by incumbents in the field. The analysis helped identify tasks which tend to be performed together and also helped

define the breadth (or narrowness) of these task clusters.

#### **Time Accounting**

Analysis of the time accounting records indicates that 581 man-hours were involved in the development and distribution of the occupational survey instrument. Breakdown of the total figure is in Appendix B.

APPENDIX A: JOB INVENTORY-INDIVIDUALIZED TRAINING INSTRUCTOR

# UNITED STATES AIR FORCE JOB INVENTORY



INDIVIDUALIZED TRAINING INSTRUCTOR AFPT 90-000-230 15 NOVEMBER 1975

OCCUPATIONAL SURVEY BRANCH
USAF OCCUPATIONAL MEASUREMENT CENTER
LACKLAND AFB, TEXAS 78236

#### OPINION SURVEY

Please rank the following activities according to how critical you think they are to the successful instructor in individualized courses. Place "l" in front of the activity you consider most critical in each group, "2" in front of the second most critical etc., until you have ranked each activity in that group. Then go to the next group and rank activities, "l" for the most critical, etc., until you have ranked all activities within each group.

Establish positive learning environment.
Apply motivation techniques appropriate to self-paced instruction.
Establish and maintain rapport with students.
Evidence fairness, tact, and good judgement.
Exhibit professional attitude to assigned and non-assigned duties.
Establish professional contacts outside of course environment.
Attend professional in-service training.
Stay current in technical specialty.
Attend job-related civilian schools at government expense.
Attend job-related civilian schools at my own expense.
Encourage safe behavior beyond that specified by course documents.
Discriminate between normal and deviant behavior in the classroom.
Conform with intent of privacy act.
Enforce rules of dress and appearance.
Intervene at the appropriate time in the learning process.
Apply motivation techniques appropriate to self-paced instruction.
Stay current in technical specialty.
Discriminate between normal and deviant classroom behavior.
Establish and maintain rapport with students.
Enforce rules of dress and appearance.
Recognize ineffective study habits.

- 1. Your help is needed in the development of a training program for instructors in courses designed around the concept of individualized instruction. He request that you respond to each item in this task inventory as honestly as you can. The new training program will be developed on the basis of your responses, so be as conscientious as possible. Your answers will also be used to develop career development courses for upgrade training in your career field and for specialty knowledge tests.
- 2. To qualify for this survey, you must meet the following conditions.
  YOU MUST:
  - a. Be a qualified instructor.
  - b. Have held your duty AFSC for at least six weeks.
  - c. Have been working in your present job for at least four weeks.
- 3. This IISAF Inventory is in two sections:
- a. A Background Information section where you provide information about vourself, and
- b. A DUTY-TASK LIST section where you provide information about your current job.
- 4. In providing the information requested, it is equally important to follow the procedures given throughout the booklet. PRINT ALL MRITE-IM INFORMATION. DO NOT WRITE IN CLASSIFIED INFORMATION. DO NOT WRITE IN BASE OR APO NUMBER.

#### INSTRUCTIONS FOR BACKGROUND INFORMATION

Complete each item in the BACKGPOUND INFORMATION section, pages if through 111 Now turn to page if and BEGIN.

	ACKGROUND INFORMATIO	М		DATE (Use Numb	ere ONLY)
PRINT YOUR ANSWERS AND CHE	CK PROPER BOXES. ASK ABOU				OAY (Card 01 5-10)
NAME (Last, First, Middle Initiel)		PREFIX	(Duty Ext)	BIRTHDAY	
	(11-2		HITY ACCOUNT	NUMBER (SSAN)	YEARS (30-31)
Are you: [] military [] military [] civilian	officer (33)	(35-3	37) - [38		10-43)
Check the box(es) which	h identify your emplo	yer:			RZ 10000 o feranci
[] Air Force (44)	[] TRADOC (49)		[] Be	ell System (	(54)
[] Army (45)	[] Navy Education	& Trng Com	md (50)[] Ur	nited Air Lir	nes (55)
[] Marines (46)	[] Marine Corps Ed Development Co	ducation &	[] 01	ther	(56)
[] Navy (47)	[] public schools		(52)		
[] ATC (48)	[] public schools	(voc/tech)	(53)		
Do you:	100	Notes William	d significance	Swit TAT bi	
[] instruct (57) [] other(6	[] supervise instr 0)	ructors (58)	) [] de	evelop curric	culum (59)
Number of subordinates	for whom you write o	official eva	aluations [	☐ (61, 62)	)
Have you completed (as you are now engaged in	a student) the indiv ? [] yes [] no	/idualized/s (63)	self-paced p	portions of 1	the course
Is your course (check	only one box)				
[] traditional group l [] self-paced (non-com	ock step (64)[] compu puter) (65) [] compu	iter assiste iter managed	ed (66) d (67)	[] other	(68)
Time in present job:	[ ] (69-70) [ Years and Mor	] (71-72) nths	DR note as	ent? does non new laterin	of smolt sepadd
Total time in career f	ield (Add the times 1	for all work	in your ca	areer field)	
	[ ] (Card 2:05-6) Years and	[ ] (7-8) Months			
Approximately how much materials in preparing		eviewing les	sson plans o	or instruction	onal/study
[] under 2 hrs per wee	k(9)[] 4 1/2-6 hrs per	week (11)	[] 8 1/2-1	10 hrs per we	eek (13)
[] 2 1/2-4 hrs per wee	k (10) [] 6 1/2-8 hr	rs per week	(12) [] ov	ver 10 hrs pe	er week (14)

BACKGROUND INFO	RMATION (Continued)	
Have you completed formal training des instruction? [] yes [] no (15	igned to prepare you for individualized	
Was the training		
[] resident, pre-service (16)	resident, in-service (17) [] OJT (18)	
Which of the following types of tests	do you use?	
[] threshold knowledge test (19)	[] criterion test (25)	
[] pre-assessment test (20)	[] progress check (criterion progress check) (2	26)
[] aptitude test (21)	[] criterion recheck (27)	
[] student self-check (22)	[] end-of-block test (28)	
[] teaching step assessment test (23)	[] attitude test (29)	
[] lesson test (24)	[] other (30)	
To evaluate student performance, do yo	u use:	
[] rating standard (31)	[] approved checklist used in the field (33)	
[] progress checklist (32)	[] other (34)	
Do foreign students (residents of fore	ign countries) regularly attend your courses?	
[] yes [] no (35)	naliged montage the area montrological action (). Hermony marget have to exact the area and to accept	
Your answers to the next two questions used together with your name nor in any box in each column)	will be used for research only; they will not be y way to connect you with the answers. (Check ON	e NE
I find my job: (36)	My job utilizes my talents and training: (37)	
[] Extremely dull	[] Not at all	
[] Very dull	[] Very little	
[] Fairly dull	[] Fairly well	
[] So-so	[] Quite well	
[] Fairly interesting	[] Very well	
[] Very interesting	[] Excellently	
[] Extremely interesting	[] Perfectly	

#### READ THIS PAGE REFORE GOING FURTHER

Have you completed the Background Information Section? Make sure before you continue with this procedure.

#### PROCEDURE A. CHECKING TASKS OF PRESENT JOB

- 1. As you read each task in the Duty-Task list, pages 1 through 12, place a check beside each task that you perform in your present job. Read every task in the inventory, even if the heading seems to not apply to you. Put your checkmark in the column headed "Check-If Done Now". Some task statements will include actions separated by a diagonal line (/). For these statements, cross out the action that does not apply.
- 2. If you instruct in a course that is only partially individualized, then respond to this survey as if you were instructing in a wholly individualized course. In other words, consider only the individualized portion of the course when you complete this survey.
- 3. Various examples, usually ATC forms, are used throughout this survey only to insure that task statements communicate. You should respond to each task statement, even where such examples do not apply.
- 4. If a task that you perform is not listed anywhere in the entire list, write it on the blank page at the end of the booklet, but do not add tasks that are classified.
- 5. Do not confuse work you do yourself with work you supervise.
- 6. Remember, at this time you are to complete only the column headed "Check-If Done Now" for pages 1 through 12. Do NOT complete the right-hand column, "Time Spent", at this time.
- 7. When you complete page 12, follow the arrow for your next instructions. Now turn to page 1 and begin your ratings.

#### PROCEDURE B. RATING TIME SPENT ON TASKS ON PRESENT JOB

- 1. Have you checked each task that you perform in your present job? Make sure, before you continue with this procedure.
- 2. Now you are to rate the relative amount of time you spend performing each task in your present job. Relative time spent means the total time you spend doing the task compared with the time you spend on each of the other tasks of your present job.
- 3. Use a rating of "1" if you spend "very much below average" amount of time on a task. Use a rating of "2" for "below average" time: and so on, up to a rating of "7" if you spend "very much above average" amount of time on the task.
- 4. Remember, you are to rate only tasks that you have already checked in the first column of pages 1 through 12.

- 5. Place your rating, according to the 7-point scale, in the right-hand column, headed "Time Spent Current Joh."
- 6. When you have completed all your ratings in the right-hand column of pages 1 through 12, you will have completed this USAF Job Inventory, and you may turn it in.
- 7. Now, turn to page 1 and BEGIN your ratings for the right-hand column.

		INDIV.	INSTR.	PAGE	1	OF	12 PAGES
	tasks you perform now ( )					Check	TIME SPENT
	y tasks you do now which are not listed.					-	
In the	In the "Time Spent" column, rate checked ( V) tasks on time spent in your present job.					IF DONE	LOW AVERAGE BELOW AVERAGE LOW AVERAGE 4 ABOUT AVERAGE B BLIGHTLY
Α.	PERFORMING ADMINISTRATIVE DUTIES					Non	ABOVE AVERA 7 VERY MUCH ABOVE AVERA
1.	Account for students (eg, take attendance	•)			5		
2.	Administer course critique				6		
3.	Assess (without testing) qualifications of by checking reading comp. AQE and IQ so				7		
4.	Assess (without testing) qualifications of by personal interview	f new s	tudents		8		
5.	Assign students to carrels, labs, etc				9		
6.	Attend staff meetings	80.15			10		
7.	Assign work details to students				11		
8.	Complete manhour accounting records (eg,	ATC for	rm 602)		12		
9.	Conduct student orientation				13		
10.	Contact maint personnel for other than au maint on trainers/training equip excluding				14	-	
	* * * * * * * *						
11.	Coordinate student welfare, discipline, of with squadrons or other agencies	r other	action	ns	15		
12.	Design or maintain status boards or charg	S			16		
13.	Distribute/account for training materials	/equip	ment		17		
14.	Establish classroom rules				18		-
15.	Identify problem readers and make referra		6.24		19	197	
16.	Insure adequate light, heat, and other he factors  Maintain audio-visual materials/hardware				20		
17.	Maintain/control examination files				22	-	-
19.	Maintain/control examinations to include	keys a	nd answe	er	23		-
20.	sheets Maintain discipline				24		
	******					-	-
						-	

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JOB INVENTORY	INDIV. INSTR.	PAGE 2	OF	12 PAGES
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A. PERFORMING ADMINISTRATIVE DUTIES (CONTIN	NOW	S. BLIBHTLY ABOVE AVERAGE S. ABOVE AVERAGE 7 VERY MUCH ABOVE AVERAGE		
21. Maintain files of course control documen	ts	25		
22. Maintain files of course training materi	als	26	New	
<ol> <li>Maintain files of materials development documents</li> </ol>	Allower Cambridge Committee	27		
<ol> <li>Maintain files of resource development a documents</li> </ol>	Many (astrony	28	102	
25. Maintain files of student records and re		29		
26. Maintain files of training evaluation re		30		
27. Maintain stock files of resident trainin	annicate of Lite	31		
<ol> <li>Perform authorized minor maint on traine equip, excluding computers (A-V equip,</li> </ol>	testers, etc)	32		
29. Prepare instructional system development	project reports			
30. Prepare planned graduation activities	50 197 149-150	34	-	0.1
* * * * * * * * *	28 - NO 24 A Y I V B Y SI	dest.	1.80	
31. Prepare student status reports	të i sanafak sve	35		
32. Prepare training activity repor		36		
33. Reassign mal-assigned student.	alatera and law	37		
34. Record results when students request ass		38		
<ol> <li>Use official publications such as techni regulations, and manuals</li> </ol>	a bak massaga k	39	7,413	
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В.								
1.	Arrange for remote training assignments field trips and tours)	for stu	dents (e	8,	40			
2.	Arrange training area (classroom, learni etc) for the immediate training activit		er, lab,		41			
3.	Attend instructor training courses off-d				42			
4.	Attend instructor training courses on-du	ty			43			
5.	Attend job-related courses off-duty				44			
6.	Attend job-related courses on-duty				45			
7.	Insure that critique forms, or other sim are available to students	ilar do	cuments,		46			
8.	Insure that instructional/study material for students	s are a	vailable		47			
9.	Insure that instructions for operating of ment are available to students	lassroom	n equip-		48			
10.	Obtain instructional/study materials suc training equipment and training aids	h as st	udy guid	es,	49			
	* * * * * * * * *							
11.	Perform operational checks on audio-visu (eg. pulses on cassettes)	al cour	seware		50	+		
12.	Perform operational checks on trainers/t other than computers	raining	equipme	nt	51			
13.	Prepare personalized lesson plans				52		1	
14.	Review lesson plans and instructional/st in preparation for class	udy mate	erials		53			
15.	Study instructor or job-related material	s			54			
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C. TESTING	NOW	B BLIGHTLY ABOVE AVERA 6 ABOVE AVERA 7 VERY MUCH ABOVE AVERA					
1. Administer	intelligence/aptitu	ide/attitude (	ypes of	test	s 5	5	
2. Administer end of cou	performance types o	of tests duri	ng or at	t the	5	6	
	pre-tests which meanstruction	sure students	job kr	nowled	ge 5	7	
4. Administer	written tests durin	ng or at the	end of o	course	s , 5	8	
5. Conduct cri	tique of test resul	ts with stude	ents		5	9	
6. Develop sca	ttergrams (or other	test analysi	ls devic	ces)	6	0	
	rformance-check ins accuracy, etc, and				6	1	-
8. Evaluate st	udents by means of ypes of tests				6	2	
9. Evaluate st	udents by means of at the end of cours		ypes of	test	s 6	3	
10. Evaluate st	udents by means of prior to instruction	pre-tests wh	ich meas	sure j	ob 6	4	
	* * * * * *						
11. Evaluate st	udents by means of	written tests	during	g or a	t 6	5	
	itten tests and sug	ggest/make rev	visions		6	6	
13. Interpret s	cattergrams (or oth	ner test analy	sis de	vices)	6	7	
14. Post (recor	d) test scores				6	8	13 10 11
	lts when students r				_	9	•
16. Score tests					7	0	
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					***** *******
1. C	ounsel students concerning attitude	DETA OF STAIL	71		
2. C	ounsel students concerning career develo	pment	72	1	
3. C	ounsel students concerning disciplinary	problems	031 73	1	
4. C	ounsel students concerning elimination	things to make	5	+	
5. C	ounsel students concerning learning dif	ficulty	6	1	
6. C	ounsel students concerning military affa	airs	7	1	0
7. C	counsel students concerning personal pro	olems	8		
8. C	ounsel students concerning test failure	ur magam ak	9	1	-
9. C	ounsel students concerning training prop	gress	10	1000	
10. C	ounsel students concerning values	40110	11		101
	* * * * * * * * *			1	
	irect students to agencies such as lega-		12	1	
	chaplain, inspector general, and command	der			ļ
	ollow-up after counseling students		13		
	ake recommendations for actions such as		, 14	1	
	discharge, proficiency advancement, etc repare student counseling reports/record		15		
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Ε.	E. CONDUCTING SELF-PACED INSTRUCTION								
1.	Assign/shift students to tracks or modul				16				
2.					17	Tra			
3.				2	18				
4.					19				
5.			students	3	20				
6.	Follow instructional flow charts to commovement through course	rol st	udent		21				
7.					22				
8.	Instruct students in proper use of response	onder u	nits	ale jepi	23				
9.	Intervene in the learning process to ins	formally	y determ	ine	24				
10.		v			25				
	* * * * * * * * *								
11.	Participate in documented experimental	studies			26				
12.	Prescribe remedial action			estab	27				
13.	Recommend students for duty as class lea	aders			28				
14.	Recommend students for instructor aides				29				
15.	Select/approve students for duty as class	ss lead	ers		30				
16.	Select/approve students for instructor	aides			31				
17.	Show audio-visuals such as films, slide	s, etc			32				
18.					33				
19.	Tutor individual students				34				
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	eck tasks you perform now ( V).		N. 1	Check	TIME SPENT		
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	F. CONDUCTING COMPUTER MANAGED OR ASSISTED (PRESENTED) INSTRUCTION						
	1. Assign remediation to students when com	puter is down		35			
100	2. Assign students to lessons when computer	r is down		36			
	3. Call up desired program	41.000.003.00.00		37			
	<ol> <li>Check student test forms, worksheets and data forms for format prior to machine</li> </ol>		re :	38			
	5. Complete records of computer use			39			
	6. Contact maintenance personnel when compo	uter malfunctio	ns	40			
	7. Determine when to override computer pres	scriptions		41			
	<ol> <li>Input learning progress data (eg, test performance checks) to computer</li> </ol>	results and		42			
	9. Input resources availability data to con	mputer		43			
1	O. Input student administrative data to con	mputer		44			
	* * * * * * * * *						
1	1. Instruct students in operation of compu	ter		45			
1	<ol> <li>Insure that students receive computer as native modules</li> </ol>	ssigned alter-		46			
1	3. Interpret computer printouts/displays			47			
1	4. Match students to media equipment when	computer is dow	m ·	48			
1	5. Override/adjust computer prescriptions			49			
1	6. Perform authorized minor maintenance of terminals	computer		50			
1	7. Perform authorized troubleshooting of co	omputer		51			
1	8. Perform operational checks of computer	terminals		52			
1	9. Perform update procedures when computer	is down		53			
2	O. Record test results when computer is down	√n		54			
	* * * * * * * * *						

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	tosks you perform now ( )				Check	TIME SPENT	
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F.	F. CONDUCTING COMPUTER MANAGED OR ASSISTED (PRESENTED) INSTRUCTION (CONTINUED)  21. Remedy student errors in terminal operation 55						
21.	Remedy student errors in terminal open	ration	1596	55			
22.	Request information from computer			56			
23.	Shut down and secure terminals		-	57			
NOTE	: If any task you perform under this of write it on the blank page at the e						
1	Caracter Manager		28.53.5	0,591,331	2388		
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G. DEVELOPING CURRICULUM				NOW	ABOVE AVERA 7 VERY MUCH ABOVE AVERA
Conduct and record results of s     for programmed materials	small/large group t	ryouts	58	Des	,
2. Conduct course reviews			59		
3. Conduct formal (documented) eva	aluation of courses	of	60		
4. Construct job inventory question	onnaires/checklists		61		
5. Construct rating standards or of uate student performance during		to eval-	- 62	1.	
6. Correlate training control documents data such as occupational surv	uments with field s	urvey	63		
<ol> <li>Design or assist in designing/s simulators</li> </ol>			64		
<ol> <li>Design, sketch, compose or advantage illustrations</li> </ol>	ise on manuscript		65		
9. Design slides or transparencies	5		66		
10. Determine media (materials/hard	dware) support requ	irements	67	mpd	
* * * * *	* * * *				
11. Develop course charts			68		
12. Develop criterion performance e			69		
13. Develop evaluation project plan	ns		70		
<ol> <li>Develop guidelines and checklis reviews</li> </ol>		urse	71		
15. Develop lists of items to be to	rained		72		
16. Develop plans of instruction			04:73		
17. Develop proficiency levels for			5		
18. Develop/revise programmed text			6		
19. Develop standardized lesson pla			7		
<ol> <li>Develop training plans (detaile course to include resource red</li> </ol>			8		
* * * * *	* * * *				

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G. DEVELOPING CURRICULUM (CONTINUED)				NOW	B. GLIGHTLY ABOVE AVERAGE B. ABOVE AVERAGE 7. VERY MUCH ABOVE AVERAGE
<ol><li>Establish instructional sequence, methods, courses or modules)</li></ol>	, media (fo	or	9		
22. Establish/recommend course entry prerequis	ites	W Trees	10		
23. Evaluate tryout results during development instructional materials	of		11		116
24. Insure currency of periodic inspections of visual equipment/materials	audio-		12		
25. Interview subject matter specialists			13		
26. Make/suggest changes to course design			14	Lejo.	-10
27. Observe task performances during development	ent of tra	ining	15		
28. Perform photography for curriculum develop	ers	Transfer	16	12.75	
<ol> <li>Prepare course announcements for publicati and Community College of the AF Handbook)</li> </ol>	lon (eg, Al	FM 50-5	17		
30. Prepare Instructional System Development (		ect	18	12.13	
* * * * * * * *	0.00				
31. Prepare/revise audio-visual scripts		•	19		LLI I
32. Write learning objectives	1102.03		20		1 = 83
33. Write/revise programmed instructional text	s		21		7.63
34. Write test questions/instructions	343740	20074	22		
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H. SUPERVISORY					NOW	B. BLIGHTLY ASOVE AVERA 6. ABOVE AVERA 7. VERY MUCH ABOVE AVERA
1. Arrange for documented experimental st	udies	al year or		23		
2. Assign personnel to duty positions	10A 42964		12,360	24	19-10	
3. Certify personnel for instructor duty				25		
4. Complete instructor proficiency record ATC form 336 and ATC form 10)	(eg, AF	form 623	,	26		2 (1)
5. Conduct formal on-the-job training (0J)			V 9845	27		
6. Conduct orientations/tours for visitors	3			28		1 - 19
7. Conduct/schedule instructor in-service		session	S	29		
8. Draft organization and functional char	ts			30		
9. Draft replies to student critiques				31		,
10. Evaluate grading practices			,	32 .		
* * * * * * * * *	6 61,6 <sub>2</sub> ,20 1					
<ol> <li>Initiate recommendations for changes in descriptions</li> </ol>	AF spec	ialty		33		
12. Orient instructors to role				34		
13. Perform instructor evaluation (ATC for	n 281)			35		
14. Recommend/approve budget				36		
15. Recommend instructors for recognition				37	1	
16. Review/approve curriculum materials du				38		
<ol> <li>Review/approve/disapprove recommendation recycle/disenrollment/proficiency advantage</li> </ol>	ancement			39		
18. Select, as instructors, recent course				.40		
19. Select persons other than recent course instructor duty	101 101			41		4.4
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ı.	TEACHING GROUP OR TEAM ACTIVITIES IN AN INSTRUCTIONAL ENVIRONMENT	INDIVID	UALIZED			NOW	S ABOVE AV	
1.	Conduct demonstration lesson called for an individualized instructional environ		on plan	in	42			
2.		for by		lan	43			
3.		plan in	an		44			
4.	Conduct discussion not called for by les individualized instructional environmen	son pla	n in an		45			
5.	Conduct gaming exercise (eg, role playin lesson plan in an individualized instru	g) call			46			
6.	Conduct gaming exercise not called for b	y lesso			47	1		
7.	an individualized instructional environ Conduct lecture called for by lesson pla		indivi-		48	<u> </u>		
8.	dualized instructional environment Conduct lecture not called for by lesson		n an		49			-
9.	individualized instructional environmen Conduct performance lesson called for by	lesson	plan in		50			
10.	an individualized instructional environ Conduct performance lesson not called fo		sson pla	n	51			
	in an individualized instructional envi	ronment						
	*****							
11.	Conduct remedial training for a group or dents in an individualized instructiona				52			
12.		n a one	-to-one		53	1		
13.	Conduct seminar/symposium called for by individualized instructional environmen	lesson		an	54			
14.		by les	son plan		55			
15.	Conduct team performance lesson called f in an individualized instructional envi	or by 1	esson pl	an	56	1		
16.	Conduct team performance lesson not call plan in an individualized instructional	ed for		n 05:	57	1		
NOT	E: If any task you perform under this dut					1		-
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WHEN YOU HAVE COMPLETED ALL RATINGS	IN "TIME SPENT			
CURRENT JOB" COLUMN, PAGES 1-12, YOU COMPLETED THIS USAF JOB INVENTORY, AN	WILL HAVE	<del></del>		
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## PRIVACY ACT STATEMENT FOR USAF JOB INVENTORY, AFPT 90-000-230

Authority for collecting the information in this job inventory is contined in Executive Order 9397, 22 Nov 1943; Section 301, Title 5, US Code; and AFM 35-2.

PRINCIPAL PURPOSE(S) Name and Social Security Account Number are required to verify that the individual completing the job inventory is the same individual listed in the UAR file and to allow analysts to contact an individual to obtain further information about the duties and tasks performed by career ladder incumbents.

3. ROUTINE USES Information provided by individual respondents will not be disclosed and will be treated confidentially. Individual identity will not be revealed. Job information from groups of respondents, who will not be identified by name or Social Security Account Number, will be used for the following purposes:

1. Evaluation of career field structure

2. Preparation of specialty training standards and training programs

3. Weighted Airman Promotion System test outlines

4. Personnel research

5. Other personnel management systems applications

Completion of the inventory by job incumbents is mandatory. Failure to provide information would detract from the Air Force's ability to evaluate career field structures; prepare specialty standards and training programs; prepare Weighted Airman Promotion System test outlines; perform personnel research; and perform other personnel management systems applications.

USAF Job Inventory
15 Nov 1975

PRIVACY ACT STATEMENT

## APPENDIX B: MAN-HOURS EXPENDED

263 man-hours developing initial task list
(This includes literature search but not site visits.)
87 man-hours in first trial validation
54 man-hours in first revision
106 man-hours for final draft development
20 man-hours for collation
51 man-hours for distribution to potential respondents.

This level of effort appears minimal in the light that the procedure results in empirical data upon which to determine training requirements.

APPENDIX C: SURVEY SAMPLE RESULTS

## OCCUPATIONAL SURVEY REPORT



INDIVIDUALIZED INSTRUCTOR

AFPT 90-000-230 25 JUNE 1976

OCCUPATIONAL SURVEY BRANCH
USAF OCCUPATIONAL MEASUREMENT CENTER
LACKLAND AFB TEXAS 78236

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## RESULTS

The structure diagram (Figure 1) illustrates that the Individualized Instructor sample is divided into 11 areas. Some overlap in task performance exists between these groups but, in general, the differences were sufficient to warrant separate job types. In some cases, the differences between groups were not related to tasks performed per se but rather the amount of time individuals spent performing tasks.

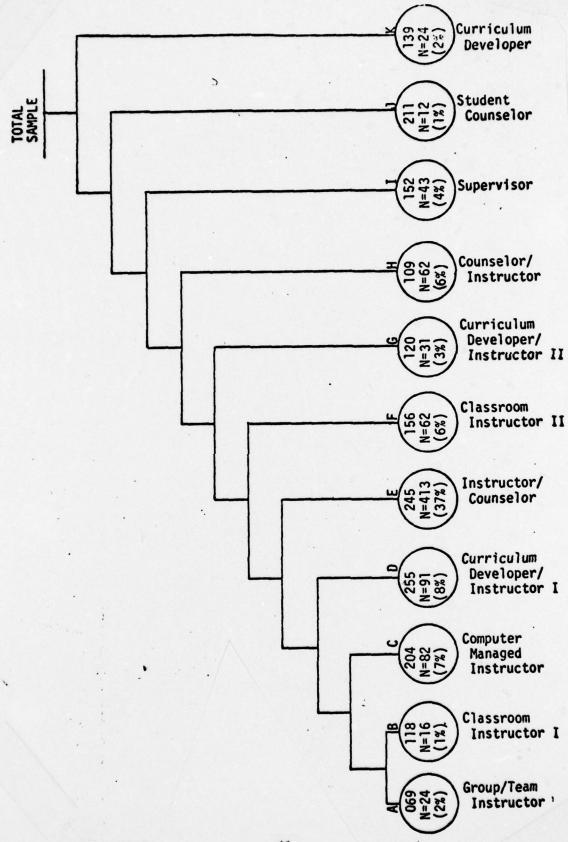
The following descriptions provide task performance and background characteristics of each job grouping. A more detailed analysis of the job groups is described in the Job Grp and the PRTVR printouts.

- A. Group/Team Instructor (Ggp 069, N=24, 2%)
  - 1. Employer: Primarily AF but not assigned to ATC.
- 2. Supervision: Twelve percent of the group members indicated they supervised an average of 1.7 subordinates.
  - 3. Type course: Other (group or team).
  - 4. Job Interest (average) = 6.2.
  - 5. Utilization of Talents and Training (average) = 5.0.

The members of this group spent 45 percent of the job time performing administrative duties and teaching group or team activities. The most time-consuming tasks included conducting performance lessons and discussions, tutoring individual students, and maintaining files of student records or reports. Three other considerations seem noteworthy: (1) Significantly less job time was devoted to team or group instruction by members of the other groups and hence this group's uniqueness; (2) incumbents in this group indicated the highest level of job interest when compared to all other. groups. This may be due in part to the fact that certain elements of this job are similar to the group lock step method of instruction; (3) perceived utilization of talents and training was also highest for this group. This finding further reinforces the explanation in (2) above, i.e., the majority of all instructors in this survey received training in the group lock step. method of instruction, but not in self-paced instruction. Of all groups identified, Grp 069 was probably the most similar to the traditional instructional method so that incumbents in this group were better prepared for their roles as instructors.

- B. Classroom Instructor I (Grp 118, N=16, 1%)
  - 1. Employer: Primarily AF ATC.
  - 2. Supervision: None.





- 3. Type course: Self-paced (non-computer).
- 4. Job interest (average) = 5.1.
- 5. Utilization of Talents and Training (average) = 3.9.

The incumbents in this group spent 46 percent of their job time preparing for and conducting self-paced instruction. An additional 38 percent of their job time was devoted to performing administrative duties and testing. The most time-consuming tasks performed by the group members included circulating among students to observe student progress, intervening in the learning process to determine progress or to record results, tutoring students, and maintaining discipline. The job performed by incumbents in this group is very narrow in breadth as 19 tasks comprise 50 percent of their job time. Only one individual directly supervised other personnel.

- C. Computer Managed Instructor (Grp 204, N=82, 7%)
  - 1. Employer: 50% AF, 50% Navy.
- 2. Supervision: Thirty-one percent of the incumbents indicated supervising an average of 14 subordinates.
  - 3. Type course: Computer managed.
  - 4. Job interest (average) = 5.1.
  - 5. Utilization of Talents and Training (average) = 4.1.

Thirty-seven percent of the members' job time in this group was devoted to performing administrative duties and conducting computer managed or assisted (presented) instruction. An additional 42 percent of their job time was spent testing, counseling, and performing other self-paced instructor duties. The most time-consuming tasks included circulating among students to observe progress, tutoring, maintaining discipline, interpreting computer printouts and displays, and counseling students. Although the members of this group broke out separately as a group, their job was not significantly different than that performed by personnel performing non-computer managed instruction.

- D. Curriculum Developer/Instructor I (Grp 255, N=91, 8%)
  - 1. Employer: AF ATC.
- 2. Supervision: Thirty-three percent indicated supervising an average of 6.9 subordinates.
  - 3. Type course: Self-paced (non computer).

- 4. Job interest (average) = 4.9.
- 5. Utilization of Talents and Training (average) = 4.4.

Members of this group spent 21 percent of their job time performing administrative duties and an additional 19 percent developing curriculum. Twenty-six percent of their job time was devoted to preparing for and conducting self-paced instruction. The most important tasks for these incumbents was observing students in the classroom, maintaining discipline, insuring that instructional/study materials are available for students, reviewing lessons and other study materials, and critiquing courseware. This particular job type was considerably broader in scope than most of the other jobs discussed here as 50 tasks accounted for 50 percent of their job time.

- E. Instructor/Counselor (Grp 245, N=413, 37%)
  - 1. Employer: AF ATC.
- 2. Supervision: Ten percent directly supervised an average of 7.3 subordinates each.
  - 3. Course: Self-paced (non-computer).
  - 4. Job satisfaction (average = 5.2.
  - 5. Utilization of Talents and Training (average) = 4.4.

The largest of all job types discussed, members of this group spent 42 percent of their job time performing administrative duties and counseling. An additional 31 percent was spent preparing for and conducting self-paced instruction. The most time-consuming tasks included circulating among students to observe student progress, tutoring and counseling students, maintaining discipline, and insuring the availability of instructional or study materials. In general, this group would most likely characterize the "typical" job of the self-paced instructor.

- F. Classroom Instructor II (Grp 156, N=62, 6%)
  - 1. Employer: AF ATC.
  - 2. Supervision: None.
- Course: Sixty-three percent self-paced (non-computer),
   percent computer managed.
  - 4. Job interest (average) = 5.2.
  - 5. Utilization of Talents and Training (average) = 4.0.

Forty-seven percent of the members' job time in this group was devoted to performing administrative duties and preparing for instruction. An additional 33 percent was spent conducting self-paced instruction and testing. Important tasks performed by these incumbents were circulating among students to observe progress, arranging classrooms and insuring study materials are available, maintaining discipline and taking attendance. Members of this group perform a job that is similar to that performed by the members in Grp 118 (Instructor I). The major difference between the two groups was not due to the types of tasks performed but rather the amount of time members spent performing tasks. Members from Grp 118 spent considerably more time in the classroom while members from Grp 156 spent more time preparing for instruction. All background variables between the groups were similar.

- G. Curriculum Developer/Instructor II (Grp 120, N=31, 3%)
  - 1. Employer: Primarily AF; 50% assigned to ATC.
- 2. Supervision: Twenty-two percent supervised an average of 2.7 subordinates.
  - 3. Course: Self-paced (non-computer).
  - 4. Job interest (average) = 5.5.
  - 5. Utilization of Talents and Training (average) = 4.4.

Incumbents in this group spend 38 percent of their job time performing administrative duties and developing curriculum. An additional 43 percent was spent preparing for and conducting self-paced instruction and testing. Important tasks were using official publications, studying instructor or job related materials, circulating among students, and evaluating tests and students. The members of this group have a job that is similar to that performed by the incumbents in Grp 255. However, fewer members in this group perform instructor tasks in a self-paced environment. There were also several curriculum tasks performed by 30 percent fewer members in Grp 120 compared to Grp 255 including developing or writing programmed instructional texts, determing media support requirements, and conducting group tryouts for programmed materials. In addition, this job was not as broad as that performed by the members in Grp 255.

- H. Counselor/Instructor (Grp 109, N=62, 6%)
  - 1. Employer: AF ATC (55%), Navy (32)%.
- 2. Supervision: Eleven percent indicated they supervise an average of 4.3 subordinates each.
  - 3. Type course: Self-paced (66%), computer assisted (34%).

- 4. Job interest (average) = 4.9.
- 5. Utilization of Talents and Training (average) = 3.8.

Members in this group spent 48 percent of their job time performing administrative functions and counseling. An additional 38 percent of this job time was spent preparing for and conducting both non-computer and computer assisted instruction. The most time-consuming tasks performed included circulating among students to observe student progress, counseling students concerning training progress, learning difficulty, and test failure, and maintaining discipline. This job type is similar to Grp 245 except that members in that job spend less time performing counseling duties and more time in the classroom and testing. Members of this job type also perform fewer tasks than incumbents in Grp 245.

- I. Supervisor (Grp 152, N=43, 4%)
  - 1. Employer: AF ATC.
- 2. Supervision: Seventy-nine percent indicate they supervise an average of 12 subordinates each.
  - 3. Type course: Primarily self-paced (non-computer).
  - 4. Job interest (average) = 5.9.
  - 5. Utilization of Talents and Training (average) = 4.7.

Incumbents in this group spent 71 percent of their total job time counseling, supervising, and performing administrative duties. Less than ten percent of their job time was devoted to conducting self-paced instruction. The most time-consuming tasks were maintaining discipline and counseling students concerning training progress, test failure, learning difficulty and attitude. Members of this group reported more direct supervisory functions than members of the other job types although the job was considerably narrower than several of the other job types.

- J. Student Counselor (Grp 211, N=12, 1%)
  - 1. Employer: Navy (33%), AF (59%), Army (8%).
- 2. Supervision: Fifty-eight percent indicated supervising an average of 7.7 subordinates.
- 3. Type course: Self-paced (non-computer) and computer assisted/managed.